**FIG. 1**

### Genomic copy Y sequence

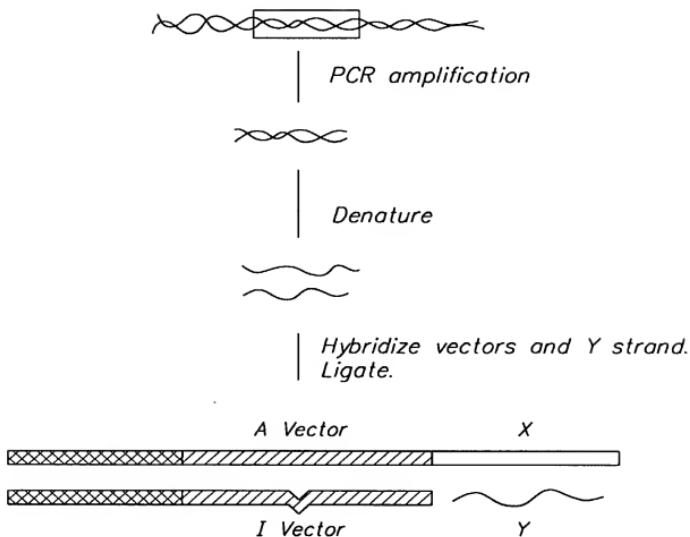
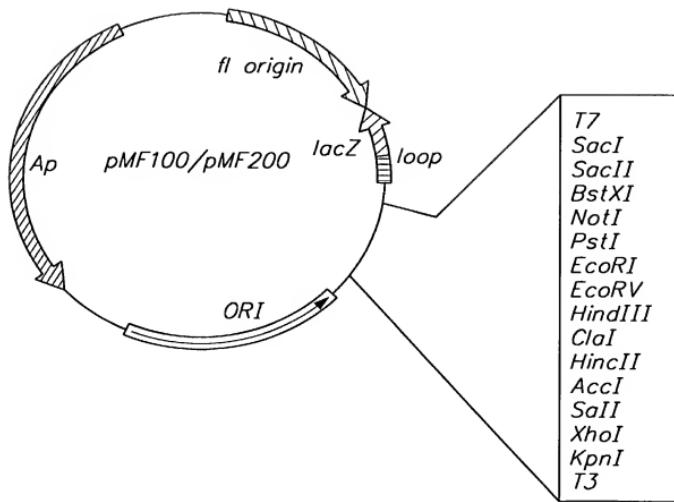
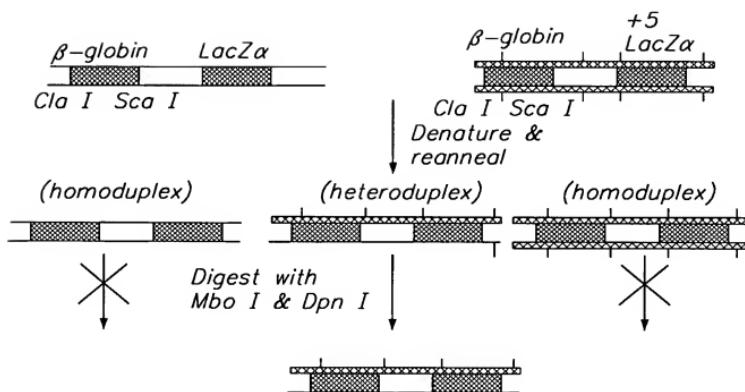


FIG. 2



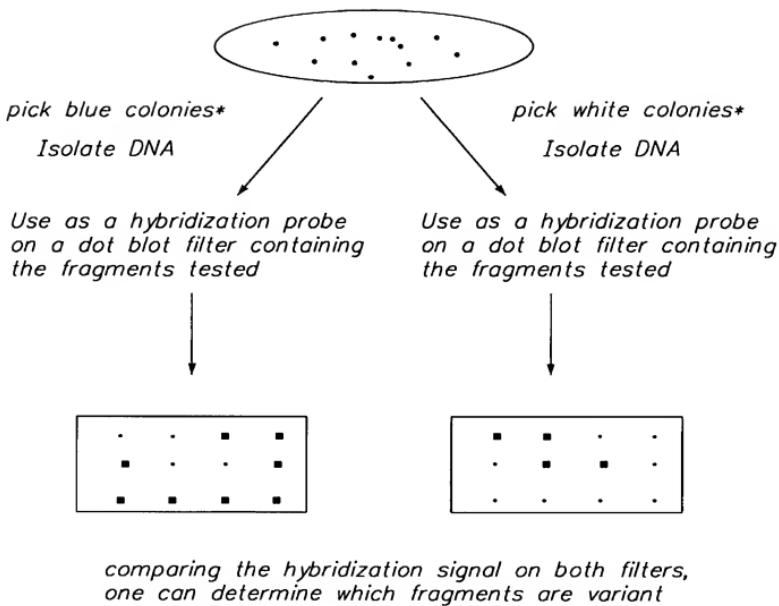
**FIG. 3**



I: methylated GATC

— : plasmid with intact  $LacZ\alpha$ — : plasmid with a 5 bp insertion in  $LacZ\alpha$ 

FIG. 4



**FIG. 5**

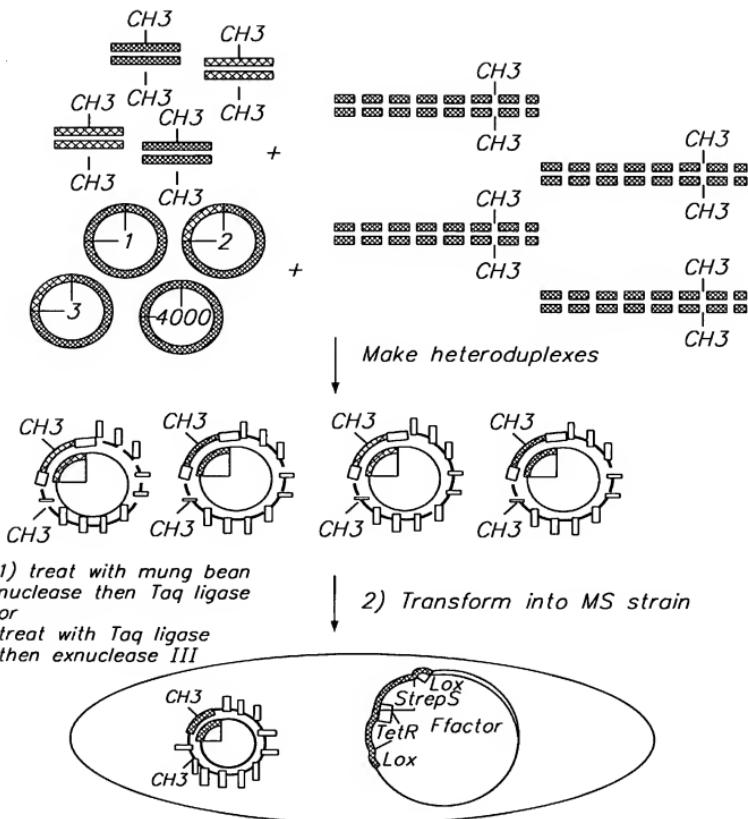


FIG. 6A

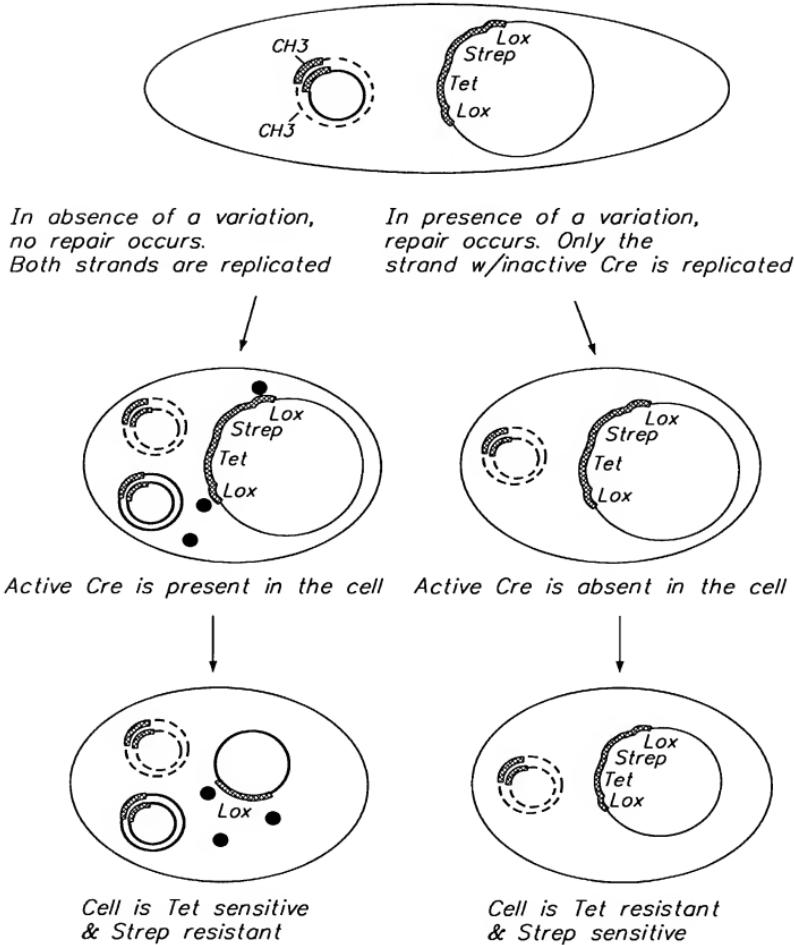


FIG. 6B

Cells are grown in two tubes supplemented either with

Tetracycline

or

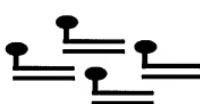
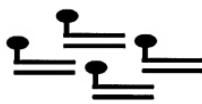
Streptomycin



Next day DNA is preped from the pool of the cells grown in each tube

DNA from the Tet pool is labeled with green fluorescence

DNA from the Strep pool is labeled with red fluorescence



DNA from both pools are mixed and hybridized to a DNA microarray.  
Each spot corresponds to a different gene fragment that is being tested

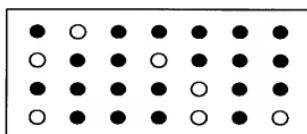


FIG. 6C

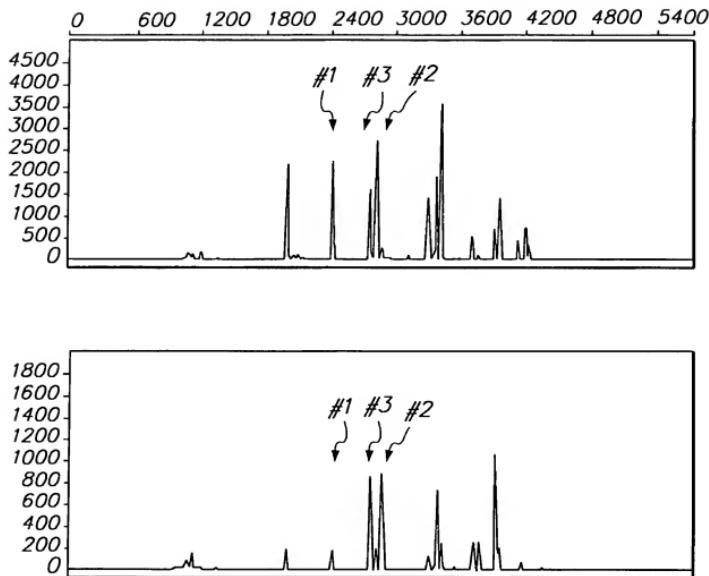


FIG. 7